

Date: Monday, 02/03/2009 9:05:10 AM  
 User: Julie Dawson

## Process Sheet

|  |   |
|--|---|
| <b>Customer</b> : CU-DAR001 Dart Helicopters Services  | <b>Drawing Name</b> : CLEVIS                                |
| <b>Job Number</b> : 46144                              |   |
| <b>Estimate Number</b> : 10574                         |   |
| <b>P.O. Number</b> :                                   | <b>Part Number</b> : D34531                                 |
| <b>This Issue</b> : 02/03/2009 <b>S.O. No.</b> :       | <b>Drawing Number</b> : D3453 REV A                         |
| <b>Prsht Rev.</b> : NC                                 | <b>Project Number</b> : N/A                                 |
| <b>First Issue</b> : / / <b>Type</b> : MACHINED PARTS  | <b>Drawing Revision</b> : A                                 |
| <b>Previous Run</b> : 42178                            | <b>Material</b> :   |
| <b>Written By</b> :                                    | <b>Due Date</b> : 16/03/2009 <b>Qty:</b> 20 <b>Um:</b> Each |
| <b>Checked &amp; Approved By</b> : <u>JUD 09.03.02</u> |   |
| <b>Comment</b> : A 05.09.27 New issue EC               |   |

## Additional Product

Job Number:



|                |                              |                      |
|----------------|------------------------------|----------------------|
| <b>Seq. #:</b> | <b>Machine Or Operation:</b> | <b>Description :</b> |
|----------------|------------------------------|----------------------|

|     |           |                     |
|-----|-----------|---------------------|
| 1.0 | M304R1250 | 304 round bar 1.250 |
|-----|-----------|---------------------|

**Comment:** Qty.: 0.2880 f(s)/Unit Total : 5.7600 f(s)

Material: AISI 304 SS Round Bar Ø1.250

(M304R1.250)

Batch: M108156 ~ 16 pcs → 2.6 ft (1 ft ends)M105872 ~ 4 pcs → 1.7600 ft (not in inventory)

09/03/03

20 pcs

|     |          |                          |
|-----|----------|--------------------------|
| 2.0 | HARDINGE | HARDINGE CNC LATHE SMALL |
|-----|----------|--------------------------|

**Comment:** HARDINGE CNC LATHE SMALL1-Turn as per Folio FA577 Rev: AA & Dwg D3453 Rev: A

2- Deburr as per dwg D3453

09/03/03

20 pcs

|     |     |  |
|-----|-----|--|
| 3.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE |
|-----|-----|--|

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

09/03/03

20 pcs

|     |       |                                |
|-----|-------|--------------------------------|
| 4.0 | HAAS1 | HAAS CNC VERTICAL MACHINING #1 |
|-----|-------|--------------------------------|

**Comment:** HAAS CNC VERTICAL MACHINING #11-Mill as per Folio FA577 Rev: A & Dwg D3453 Rev: A

2- Deburr as per dwg 3453

PTC

J.L 09/03/13

|     |     |  |
|-----|-----|--|
| 5.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE |
|-----|-----|--|

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

J.L 09/03/13

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: D3453-1 PAR #: N/A Fault Category: Prod / machined Part NCR: Yes No DQA: D Date: 09/03/16  
 Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: D Date: 09/03/17

| NCR: <u>46144</u> |            | WORK ORDER NON-CONFORMANCE (NCR)   |                                       |                                 |                               |                                       |                                       |                                       |
|-------------------|------------|--|---------------------------------------|---------------------------------|-------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| DATE              | STEP       | Description of NC<br>Section A   | Corrective Action Section B           |                                 |                               | Verification<br>Section C             | Approval<br>Chief Eng                 | Approval<br>QC Inspector              |
|                   |            |  | Initial<br>Chief Eng                  | Action Description<br>Chief Eng | Sign &<br>Date                |                                       |                                       |                                       |
| <u>09/03/13</u>   | <u>3.0</u> | <u>1 part is scrap, sitting<br/>saw broke while machining<br/>and the pressure of the<br/>tool bent the part.<br/>RC: Tooling.</u> | <u>[Signature]</u><br><u>10/04/12</u> | <u>Scrap + no replace</u>       | <u>J.L</u><br><u>09/03/13</u> | <u>[Signature]</u><br><u>09-03-16</u> | <u>[Signature]</u><br><u>10/04/12</u> | <u>[Signature]</u><br><u>10/05-17</u> |
|                   |            |  |                                       |                                 |                               |                                       |                                       |                                       |
|                   |            |  |                                       |                                 |                               |                                       |                                       |                                       |

NOTE: Date & initial all entries

Date: Monday, 02/03/2009 9:05:10 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CLEVIS

Job Number: 46144

Part Number: D34531

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

MILLING CONV.

CONVENTIONAL MILLING MACHINE



Comment: CONVENTIONAL MILLING MACHINE

1- Drill as per dwg D3453

2-Deburr as per dwg D3453

N.A 07/03/14 (18)

7.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

N.A 09/03/14 (19)

8.0

QC8

SECOND CHECK



Comment: SECOND CHECK

7/09/03-15 (19)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: car

9/3/14

(19)

Sp

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/03/15

Job Completion



09.03.16

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

|                              |               |                             |
|------------------------------|---------------|-----------------------------|
| <b>DART AEROSPACE LTD</b>    |               | <b>Work Order:</b> 46144    |
| <b>Description:</b> Clevis   |               | <b>Part Number:</b> D3453-1 |
| <b>Inspection Dwg:</b> D3453 | <b>Rev:</b> A | <b>Page 1 of 1</b>          |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

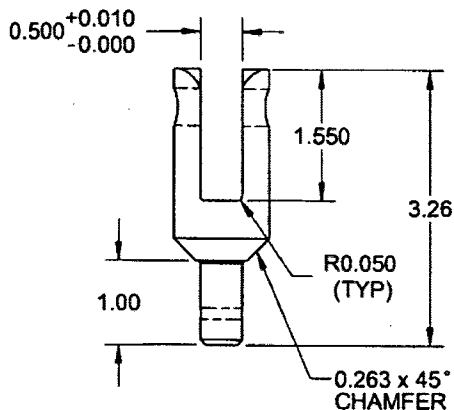
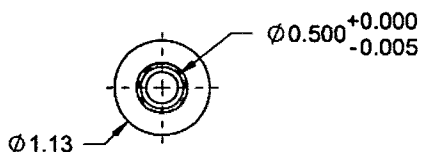
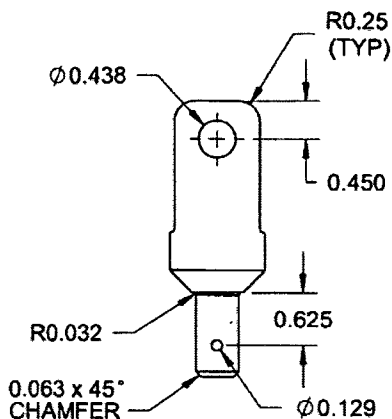
| Drawing Dimension | Tolerance       | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|-----------------|------------------|--------|--------|----------------------|----------|
| Ø0.438            | +0.006/-0.001   | .439             | ✓      |        |                      |          |
| R0.25             | +/-0.030        | .25              | ✓      |        |                      |          |
| 0.450             | +/-0.010        | .452             | ✓      |        |                      |          |
| 0.625             | +/-0.010        | 0.625            | ✓      |        |                      |          |
| 0.063 x 45°       | +/-0.010 x 0.5° | .065 x 45°       | ✓      |        |                      |          |
| Ø0.129            | +0.005/-0.001   | Ø0.129           | ✓      |        |                      |          |
|                   |                 |                  |        |        |                      |          |
| 3.26              | +/-0.030        | 3.270            | ✓      |        |                      |          |
| 1.00              | +/-0.030        | .983             | ✓      |        |                      |          |
| 1.550             | +/-0.010        | 1.550            | ✓      |        |                      |          |
| 0.500             | +0.010/-0.000   | .505             | ✓      |        |                      |          |
| 0.263 x 45°       | +/-0.010 x 0.5° | .260 x 45°       | ✓      |        |                      |          |
|                   |                 |                  |        |        |                      |          |
| Ø1.13             | +0.012/-0.001   | 1.1294           | ✓      |        |                      |          |
| Ø0.500            | +0.000/-0.005   | .4991            | ✓      |        |                      |          |
|                   |                 |                  |        |        |                      |          |
|                   |                 |                  |        |        |                      |          |
|                   |                 |                  |        |        |                      |          |
|                   |                 |                  |        |        |                      |          |

|                                    |                                |                            |     |
|------------------------------------|--------------------------------|----------------------------|-----|
| <b>Measured by:</b> C. [Signature] | <b>Audited by:</b> [Signature] | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b> 09/03/03 / 09/03/12   | <b>Date:</b> 09.03.15          | <b>Date:</b>               | N/A |

| Rev | Date     | Change                                       | Revised by        | Approved    |
|-----|----------|--|-------------------|-------------|
| A   | 06.06.30 | New Issue                                    | KJ/JLM            |             |
| B   | 07.01.17 | Dimensions added                             | KJ/JLM            |             |
| C   | 08.10.09 | Diameter symbol removed from 0.500 dimension | KJ/DD [Signature] | [Signature] |



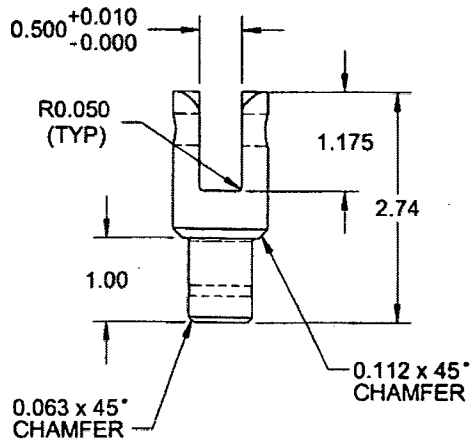
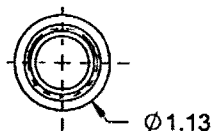
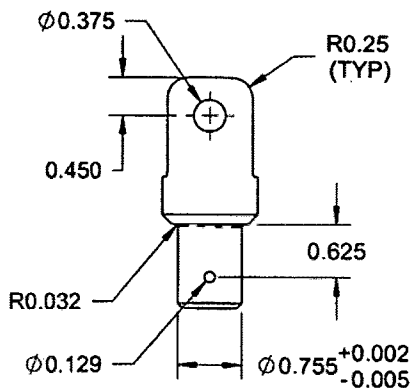
|                  |                 |   |                        |
|------------------|-----------------|---|------------------------|
| DESIGN<br>RF     | DRAWN BY<br>RF  | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br>      | APPROVED<br>    | DRAWING NO.<br>D3453                              | REV. A<br>SHEET 1 OF 2 |
| DATE<br>05.09.02 | TITLE<br>CLEVIS |   | SCALE<br>1:2           |
| A                | 05.09.02        | NEW ISSUE   |                        |



**D3453-1 CLEVIS**

**RELEASED**

05.12.09



**D3453-3 CLEVIS**

**NOTES:**

- 1) MATERIAL: AISI 304 SS ROUND BAR (REF. DART SPEC M304R)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO.

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

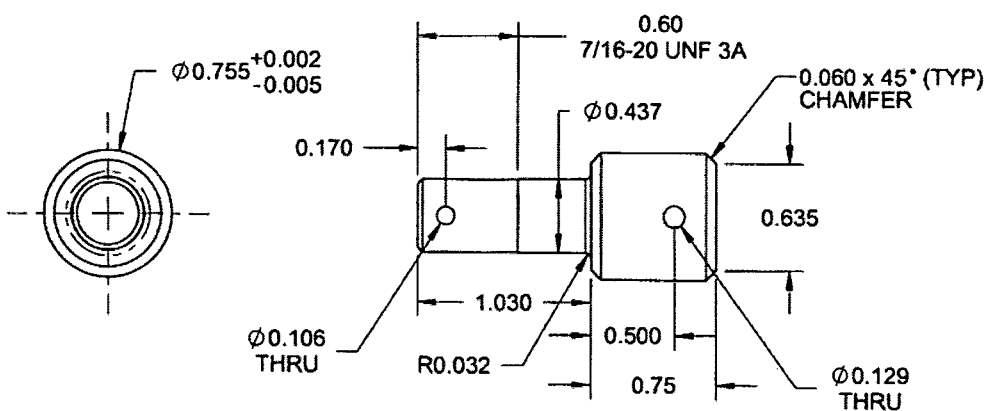
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



|                        |                                 |   |                        |
|------------------------|---------------------------------|---|------------------------|
| DESIGN<br>RF           | DRAWN BY<br>RF                  | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br>[Signature] | APPROVED<br>[Signature]         | DRAWING NO.<br>D3453                              | REV. A<br>SHEET 2 OF 2 |
| DATE<br>05.09.02       | TITLE<br>CLEVIS<br>SCALE<br>1:1 |   |                        |

RELEASED

05.12.09 [Signature]



**D3453-5 PLUG**

**NOTES:**

- 1) MATERIAL: AISI 304 SS ROUND BAR (REF. DART SPEC. M304R)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 446144

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.